

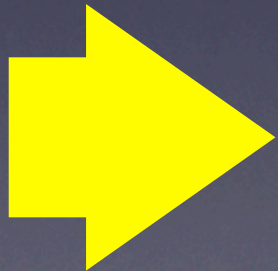
Level 1 Trigger Latency

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Super Belle Meeting Trigger Parallel

In last December Meeting...

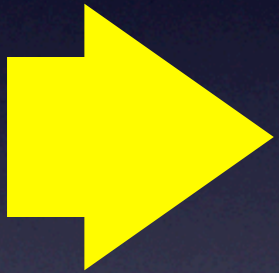
- We had a lengthy discussion on the level 1 trigger latency issue (3.5 us vs. 5 us)
- DAQ group prefers shorter time to reduce the dead time
- Trigger group prefers longer one to implement smarter trigger logic



This was what I called “latency friction” and was caused mainly by 3D track trigger idea that I introduced

Since then...

- The DAQ group agreed to have 4.5 us as the default number for the level 1 latency
- Trigger group will try hard to reduce the level 1 latency as much as possible

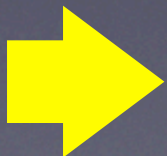


This is good news, but it still assumes the RocketIO latency is within 0.3 - 0.5 us

We plan to measure the RocketIO latency in the prototype board within this March to verify it

Note: 1) We may have room to improve the latency of 3D algorithm with faster clock (~500 MHz)

2) If we give up 3D tracking, latency will be closer to 3.5 us



Now the interval seems to be more serious issue